

REMARKS

This amendment is being filed in response to the Office Action having a mailing date of May 13, 2003. Claims 1, 11, 27, and 36 are amended to recite certain distinctive features. New claims 43-58 are added. Claims 6, 15, and 19-26, which have been withdrawn from consideration, are explicitly canceled herein without prejudice. No new matter has been added. With this amendment, claims 1-5, 7-14, 16-18, and 27-58 are pending in the application.

In the Office Action, the Examiner indicated on page 2, paragraph 4, that the informal drawings filed in the application are acceptable for examination purposes, and that the applicants will be required to submit new formal drawings when the application is allowed. On page 2, paragraph 5, the Examiner indicated that corrected drawings are required in reply to an Office Action to avoid abandonment, and that the requirement for corrected drawings will not be held in abeyance. Because there were no requirements any corrections to the drawings indicated in the present Office Action, the applicants assume that submission of formal drawings can be deferred until allowance of the application as indicated by the Examiner in paragraph 4. Accordingly, the applicants are not submitting formal drawings along with this amendment. The Examiner is kindly requested to contact the undersigned attorney if formal drawings are required at this point, so that the applicants can immediately prepare and submit the formal drawings.

On page 3, paragraph 6, the Examiner has referenced an attempt to incorporate the subject matter from the present application. Accordingly, the specification is amended as shown above to remove reference to the present application. Additionally, the specification is amended as shown above to provide the serial numbers for the various pending patent applications referenced in the Detailed Description.

On page 3, paragraphs 7 and 8, the Examiner indicated that proper use of trademarks should be reflected in the specification. Accordingly, the specification has been amended as shown above in a manner that respects the proprietary nature of the marks, such as by capitalizing the marks.

In the Office Action, claims 1, 4, 5, 7-14, 16-18, 27, and 30-42 were rejected under 35 U.S.C. § 102(e) as being anticipated by Driscoll (U.S. Patent No. 6,043,837). The other pending claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over Driscoll in view of obviousness and/or in view of Enomoto (U.S. Patent No. 5,923,384). For the reasons

set forth below, the applicants respectfully disagree with these rejections, and request that the pending claims be allowed.

A disclosed embodiment will now be discussed in comparison to the applied references. Of course, the discussion of the disclosed embodiment, and the discussion of the differences between the disclosed embodiment and subject matter described in the applied references, do not define the scope or interpretation of any of the claims. Instead, such discussed differences are intended to merely help the Examiner appreciate important claim distinctions discussed thereafter.

One embodiment of the applicants' invention involves a broadcasting system for audio and video data using a wide area network. As depicted in Figure 1 of the present application, a plurality of audio/video servers can provide audio/video data to be broadcast to a group of viewers, a single user, the public, or any combination thereof. Each of the viewers is defined by a client device, which in one embodiment comprises a mobile wireless display device. In one example embodiment, the broadcasting audio/video servers can provide their content to client terminals through a broadcasting web site.

Various other features are provided by one or more embodiments of the invention. One feature is the capability to change an incoming video signal from a first format to a second format that is more suitable for a client device that is to receive the video signal. In this manner, the signal that the client device ultimately receives is optimized to the particular characteristics of the client device and/or for the characteristics of the transmission channel (such as bandwidth) that is used to send the video signal to the client device. The changing of the video signals to the second format can be based on a number of techniques. In one technique, profile information can be sent from the client to the broadcasting server or otherwise provided to the broadcasting server, and then used to transcode the video signal to the second format.

The information associated with the client device or transmission channel that can be used by the personal broadcasting server to modify the video signal can include information such as memory size, display resolution, processing capability, and other factors. In addition, audio data may be transcoded to meet the appropriate needs of a client device.

Accordingly, characteristics of a video signal (including audio) can be changed in order to provide an optimized signal to the client device. These characteristics can include, but

are not limited to, frame rate, bit rate, resolution, frame size or frame dimension, color depth, and other characteristics. Moreover, an embodiment of the invention allows the video signal to be dynamically changed during transmission so as to compensate for changing bandwidth conditions. For example, the frame dimension may be reduced to a smaller size if the bandwidth conditions (often described in connection with quality of service, or QoS) is such that sending a video signal having a particular frame size will result in a poor image displayed at the client device. However, dynamically reducing the video image to a smaller frame size will produce a sharper image at the client device, albeit smaller in size. Such a feature may be desirable to a user who prefers to see a smaller clear picture, rather than a larger blurred picture.

Moreover according to an embodiment, multiple selectable streams may be provided from the broadcasting server. Either the broadcasting server or the client device can choose one or more of the selectable streams to be presented on the display of the client device. Accordingly, each client device can potentially select from any number of available streams, depending on which particular video quality is desired (assuming that multiple streams offer the same video program but at different formats). Additionally or alternatively, the broadcasting server may offer multiple streams each with a different video program, and wherein the client device can present one or more of the different video programs on its display by selecting the corresponding one or more streams that provide the video programs. In this sense, a true "broadcast" server is provided since multiple streams are made available for selection by multiple client devices.

Driscoll, in contrast to what the applicants have disclosed, relates to different kinds of systems and methods. Driscoll is specific to the processing and transmitting of panoramic image information. The specific implementation of the Driscoll technology is with video conferencing and telepresence. With video conferencing, a panoramic camera captures an image of a first group of users, which is then sent to another user who wishes to participate in the video conference. In Driscoll, only a single stream of video is made available and sent between the sender and the receiver in the video conferencing implementation. There are not multiple selectable streams that are made available from the panoramic image server 820. *See, e.g., Figure 8 and the accompanying description of Driscoll.* As such, Driscoll does not provide a true

“broadcast” system. Rather, the video conferencing of Driscoll is a unicast-type implementation, where only a single stream is used to transmit the video images to a single receiver.

The Examiner has correctly cited Driscoll for disclosing the capability to change the format of the video prior to and during transmission. However, there are certain parameters that are not changed. For example, Driscoll does not change the frame size and the audio. See, e.g., column 8, lines 13-15 of Driscoll.

In the other implementation of the Driscoll technology, a telepresence system is provided wherein a roving unit 901 includes a panoptic camera system 903, which captures images that are sent to a virtual reality headgear 955 that is worn by a viewer. In this implementation, it does not make sense to provide video that may change in frame size and/or in audio during transmission, since such changes can disorient the viewer that is wearing the virtual reality headgear 955. Indeed, the virtual reality experience will degrade if the size of the video frames changes during transmission, making the scenes appear very artificial to the viewer.

Accordingly, certain amendments have been made to the pending independent claims to further distinguish over Driscoll. Independent claim 1 has been amended to recite that the network gateway can provide multiple unique streams of information, having unique sets of characteristics, from which at least one stream can be selected to be displayed on the display of the display device. As described above, this feature is not disclosed, taught, or suggested by Driscoll. In the video conferencing and telepresence implementations of Driscoll, only a single stream of video is available for selection and is sent from the transmitter to the receiver. There is no motivation to change the implementations of Driscoll to provide the capability of providing multiple selectable streams, since there is no need to broadcast multiple selectable streams in Driscoll for the video conferencing and telepresence use. Driscoll does not involve a true broadcast, but rather involves a unicast-type transmission, which for efficiency purposes, is best done with a single stream only. Accordingly, amended claim 1 is now allowable over Driscoll.

Claim 1 is also further amended to clarify that certain elements of this claim do not fall within 35 U.S.C. § 112, sixth paragraph. Claim 1 is amended to better recite the selectable audiovideo formats. Other amendments are made to claim 1 to confirm the open-ended language therein, by using the term “including” instead of “comprising” within the body of the claim.

Independent claim 11 is amended to recite the capability of being able to change at least one of the frame dimension and audio associated with the incoming video signal in response to a change in a bandwidth condition. As described above, this feature is not found in Driscoll. There is no mention in Driscoll of the desirability of changing the frame size (frame dimension) or audio in response to any type of change in bandwidth condition, since Driscoll views any such changes as being undesirable to a user. *See, e.g.*, column 8, lines 13-15 of Driscoll. Claim 11 is also amended to recite conversion to a plurality of second formats, which is also not found in Driscoll. Accordingly, amended claim 11 is allowable over Driscoll.

Other amendments are made to claim 11 to clarify that certain elements of the claim do not fall within 35 U.S.C. § 112 sixth paragraph. Other amendments are made to delete unnecessary elements and/or elements which were introduced in a prior amendment.

Independent claim 27 is amended to recite that the network gateway can provide a listing of multiple streams of information, each having unique characteristics, and wherein one or more of the streams can be selected to be displayed on the display of the display device. The claim is further amended to recite that the network gateway can adapt any one of the streams to change at least one of a frame dimension and audio associated with the selected stream during the stream's transmission. As described above, multiple selectable streams and the capability to change a frame dimension or audio are not found in Driscoll. Driscoll relates to a basic panoptic camera system, which is not concerned with providing multiple streams or capability to change the frame size and audio for the specific implementations disclosed by Driscoll. Accordingly, amended claim 27 is allowable over Driscoll.

Claim 27 is further amended to clarify that certain elements do not fall within 35 U.S.C. § 112 sixth paragraph. Other amendments are made to the claim to clarify the open-ended nature of some of the elements recited within the body of the claim. An element that was previously added to claim 27 in a prior amendment has also been removed in the currently amended claim.

Independent claim 36 has been amended to recite that the broadcasting server can provide multiple video signals, wherein any one of the multiple video signals can be selected to be presented by the mobile display device. This feature is not disclosed, taught, or suggested by Driscoll since Driscoll only provides a single video signal for presentation by the mobile display

device. That single video signal is formatted either prior to transmission or during transmission for the mobile device of Driscoll, but in no case are multiple video signals having different formats made available for broadcast by the server of Driscoll, wherein any one of the signals can be selected by the client device or by the server. Claim 36 is also amended to recite determination of parameters for a plurality of second formats, which is a feature not found in Driscoll since Driscoll determines parameters for only one second format for a single stream. Accordingly, amended claim 36 is allowable.

New dependent claims 43, 48 clarify that the video signal to be presented can be selected by either the client device or by the broadcasting server. New independent claim 49 recites subject matter that is distinctive over the Driscoll reference, as does new independent claim 54. The dependent claims corresponding to these new independent claims 49 and 54 also recite distinctive subject matter. Therefore, all of the new claims are also allowable.

Payment for the new claims, plus the extension of time fee, is included along with this amendment. The applicants will be filing an Information Disclosure Statement (IDS) under a separate cover shortly after the filing of this amendment. This IDS will submit references that were cited during prosecution of the various copending applications referenced by the current application. It is respectfully requested that the Examiner review the IDS and the cited references prior to issuing the next communication, and that the Examiner contact the undersigned attorney if the IDS cannot be located when this amendment is examined.

The applicants also note that they have changed attorneys. All future correspondence should be sent to Dennis M. de Guzman (Reg. No. 41,702) at the Seed Intellectual Property Law Group, PLLC (Customer Number 00500) address noted below:

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The undersigned attorney will be filing a new power of attorney and change of correspondence address in due course. It is kindly requested that the examining attorney double check the prosecution file to ensure that the power of attorney has been made of record prior to

sending the next communication. If the power of attorney (and change of correspondence address) is not yet in the prosecution file when the next action is due for mailing by the Examiner, the applicants request that the Examiner contact the undersigned attorney to ensure that the communication is mailed to a proper address.

Overall, none of the references singly or in any motivated combination disclose, teach, or suggest what is recited in the independent claims. Thus, given the above amendments and accompanying remarks, the independent claims are now in condition for allowance. The dependent claims that depend directly or indirectly on these independent claims are likewise allowable based on at least the same reasons and based on the recitations contained in each dependent claim.

If the undersigned attorney has overlooked a teaching in any of the cited references that is relevant to the allowability of the claims, the Examiner is requested to specifically point out where such teaching may be found. Further, if there are any informalities or questions that can be addressed via telephone, the Examiner is encouraged to contact the undersigned attorney at (206) 622-4900.

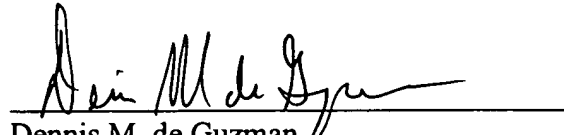
The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Application No. 09/539,193  
Reply to Office Action dated May 13, 2003

All of the claims remaining in the application are now clearly allowable.  
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

A handwritten signature in black ink, appearing to read "Dennis M. de Guzman", is written over a horizontal line.

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